

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A process of producing man-made vitreous fibres having a phosphorus content of at least 0.5%, measured as weight % P₂O₅, comprising

providing a charge of mineral material which includes briquettes, melting the charge in a shaft furnace to provide a melt and fiberising the said melt to form fibres,

wherein the briquettes comprise a non-virgin rock material comprising at least 2% phosphorus, and the non-virgin rock material ~~being selected from the group consisting of~~ is sewage sludge ash containing 8-20% Fe₂O₃, bone meal ash, granulated sewage sludge slag and mixtures thereof, and wherein the sewage sludge ash content in the briquettes is not more than 20% the charge of mineral material contains a positive amount up to 15% sewage sludge ash, by weight of charge.

2. (Previously Presented) The process according to claim 1 in which the non-virgin rock material comprises at least 3% phosphorus.

3. (Previously Presented) The process according to claim 2 in which the non-virgin rock material comprises at least 5% phosphorus.

4 - 5. (Canceled)

6. (Currently Amended) The process according to claim 1 in which the briquettes comprise at least 3% by weight and not more than 25% by weight of the non-virgin rock material.

7. (Currently Amended) The process according to claim 1 in which the briquettes comprise at least 4% by weight and not more than 15% by weight of the non-virgin rock material.

8. (Canceled)

9. (Currently amended) The process according to claim 1 in which ~~the non-virgin rock material is sewage sludge ash and~~ the charge of mineral material contains from 1 to 15% sewage sludge ash, by weight of charge.

10. (Previously presented) The process according to claim 1 in which the briquettes additionally comprise waste mineral wool.

11. (Previously Presented) The process according to claim 1 in which the briquettes are produced at least two days prior to their inclusion in the charge.

12. (Previously presented) The process according to claim 1 in which the fibres comprise less than 22% aluminium, measured as weight % Al₂O₃ and from 0.5 to 10% phosphorus measured as weight % P₂O₅.

13. (Previously presented) The process according to claim 1 in which the fibres comprise at least 1% to less than 5% phosphorus, measured as weight % P₂O₅.

14. (Canceled)

15. (Previously presented) The process according to claim 1 in which at least 90% of the phosphorus in the charge is transferred into the melt and the fibres.

16. (Canceled)

17. (Previously presented) The process according to claim 1 in which iron is tapped from the furnace.

18. (Previously presented) The process according to claim 1 in which the fibres comprise an aluminium content, measured as weight percent Al_2O_3 , of less than 4%.

19. (Currently amended) A process of producing man-made vitreous fibres comprising providing a charge of mineral material which includes briquettes, melting the charge in a shaft furnace to provide a melt and fiberising the melt to form fibres, wherein the briquettes comprise sewage sludge ash containing 8-20% Fe_2O_3 , and the charge of mineral material contains a positive amount up to 15% sewage sludge ash by weight of charge in a positive amount of not more than 20% of the briquettes.

20 - 21. (Canceled)

22. (Previously presented) The process according to claim 1 further comprising forming fibres into a product which is an insulation product, growth substrate or a granulated filler.

23. (Canceled)

24. (Previously presented) The process according to claim 1 in which the briquettes comprise at least 5% by weight and not more than 10% by weight of the non-virgin rock material.

25. (Previously presented) The process according to claim 1 in which at least 92% of the phosphorus in the charge is transferred into the melt and the fibres.

26. (Previously presented) The process according to claim 1 in which at least 95% of the phosphorus in the charge is transferred into the melt and the fibres.

27. (Currently amended) The process according to claim 1 in which the shaft furnace is a cupola furnace.

28. (Previously presented) The process according to claim 27 in which the briquettes comprise at least 4% by weight and not more than 15% by weight of the non-virgin rock material, and in which at least 92% of the phosphorus in the charge is transferred into the melt and the fibres.